

We claim:

1. An alkyl ether sulfate salt of the general formula I

5 $\text{RO}-(\text{CH}_2\text{CH}_2\text{O})_x-(\text{CH}_2-\text{CHR}^1\text{O})_y-(\text{CH}_2\text{CH}_2\text{O})_z\text{SO}_3^- \text{M}^+$ (I),

where

10 R is an unbranched or branched C₈-C₁₈-alkyl radical or mixtures of different unbranched or branched C₈-C₁₈-alkyl radicals,

R¹ is methyl, ethyl or mixtures thereof,

M⁺ is a cation, selected from the group consisting of alkali metals, NH₄⁺ and HNR²₃⁺, where R² is selected from the group consisting of unbranched or branched alkyl radicals, CH₂CH₂OH and CH₂CH(OH)CH₃,

15 x has a mean value of 0-3,

y has a mean value of 1-10,

z has a mean value of 0-30,

for which the quotient A of the critical micelle concentration cmc

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$$A = \frac{\text{cmc} (\text{RO}-(\text{CH}_2\text{CH}_2\text{O})_z\text{SO}_3^- \text{M}^+)}{\text{cmc} (\text{RO}-(\text{CH}_2\text{CH}_2\text{O})_x-(\text{CH}_2-\text{CHR}^1\text{O})_y-(\text{CH}_2\text{CH}_2\text{O})_z\text{SO}_3^- \text{M}^+)} \text{ is } > 1.$$

25 2. An alkyl ether sulfate salt as claimed in claim 1, wherein the radicals have the following meaning:

30 R is an unbranched or branched C₁₀-C₁₈-alkyl radical or mixtures of different unbranched or branched C₁₀-C₁₈-alkyl radicals,

R¹ is methyl

x has a mean value of 0-2,

y has a mean value of 1-3,

z has a mean value of 0-10.

35 3. An alkyl ether sulfate salt as claimed in claim 1 or 2, wherein the radicals have the following meaning:

R is an unbranched or branched C₁₀-C₁₅-alkyl radical or mixtures of different unbranched or branched C₁₀-C₁₅-alkyl radicals,

R¹ is methyl,

x is 0,

5 y has a mean value of 1-2,
z has a mean value of 0-4.

4. The use of alkyl ether sulfate salts as claimed in one of claims 1 to 3 as anion surfactant component in laundry detergents and cleaning compositions.

10 5. The use as claimed in claim 4, wherein the laundry detergents and cleaning compositions are selected from the group consisting of powder laundry detergents, compact laundry detergents, super compact laundry detergents, laundry detergent extrudates, laundry detergent gels, liquid laundry detergents, 15 liquid laundry detergent pouches, liquid laundry detergent concentrates, hand dishwashing detergents, dishwashing detergents for mechanical dishwashers, scouring cleaners or scouring milk, handwashing pastes or gels, all-purpose cleaners, glass cleaners, window cleaners, floor cleaners, bath cleaners, WC cleaners, kitchen cleaners, slaughterhouse cleaners, car shampoos and metal 20 cleaners.

6. The use of alkyl ether sulfate salts as claimed in one of claims 1 to 3 as anion surfactant component in chemical engineering applications.

25 7. The use as claimed in claim 6, wherein the chemical engineering applications are selected from the group consisting of textile aids, papermaking aids and leather aids, fire-extinguishing foams, pesticide formulations, uses in emulsion polymerizations, for metal pretreatment, as aids for the ceramics industry, as cooling lubricants and in emulsifying processes.

30 8. The use of alkyl ether sulfate salts as claimed in one of claims 1 to 3 in cosmetics applications.

35 9. The use as claimed in claim 8, wherein the cosmetics applications are selected from the group consisting of shower gels, hair shampoos, bath additives, syndets, lotions, oils/perfume oils, liquid handwashing soaps and emulsifiers for creams.

10. A laundry detergent or cleaning composition or cosmetics formulation comprising alkyl ether sulfate salts as claimed in one of claims 1 to 3.